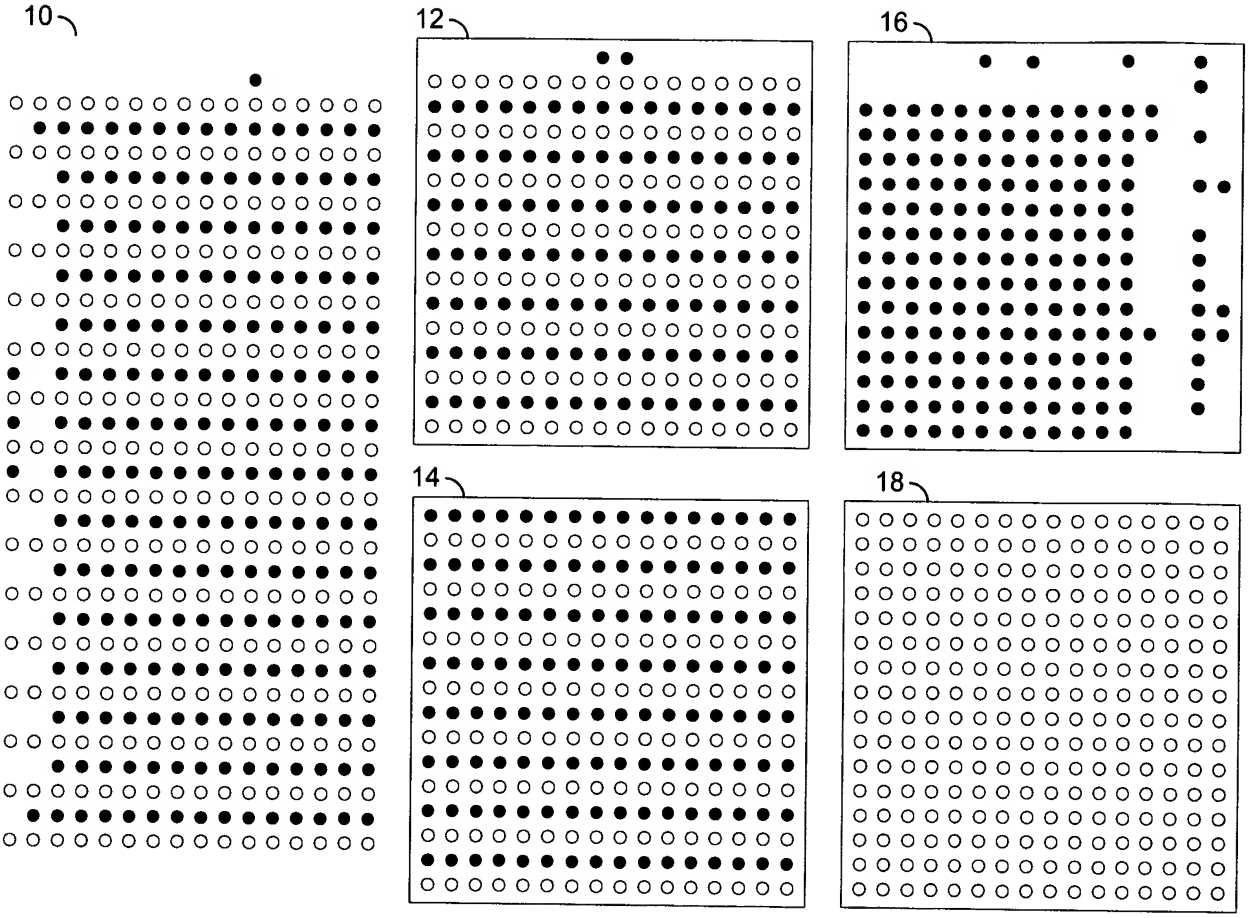
10
12
16
14
18
MACROBLOCK PAIR AS PIXELS LOCATED IN A VIDEO FRAME
MACROBLOCK PAIR ENCODED AS FRAME MACROBLOCKS
MACROBLOCK PAIR ENCODED AS FIELD MACROBLOCKS
TOP FIELD PIXEL
BOTTOM FIELD PIXEL

FIG. 1

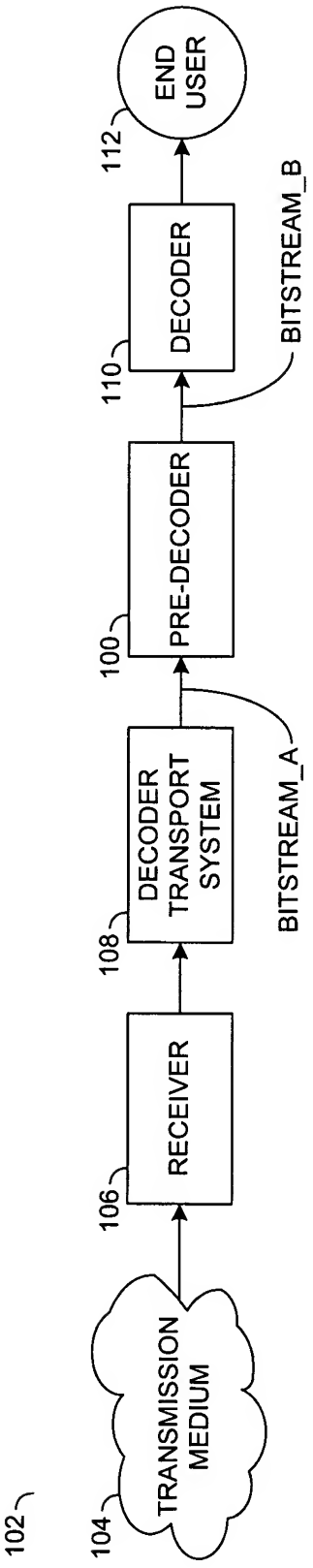
102
104
TRANSMISSION MEDIUM
106
RECEIVER
108
DECODER TRANSPORT SYSTEM
BITSTREAM_A
100
PRE-DECODER
110
DECODER
BITSTREAM_B
112
END USER

FIG. 2

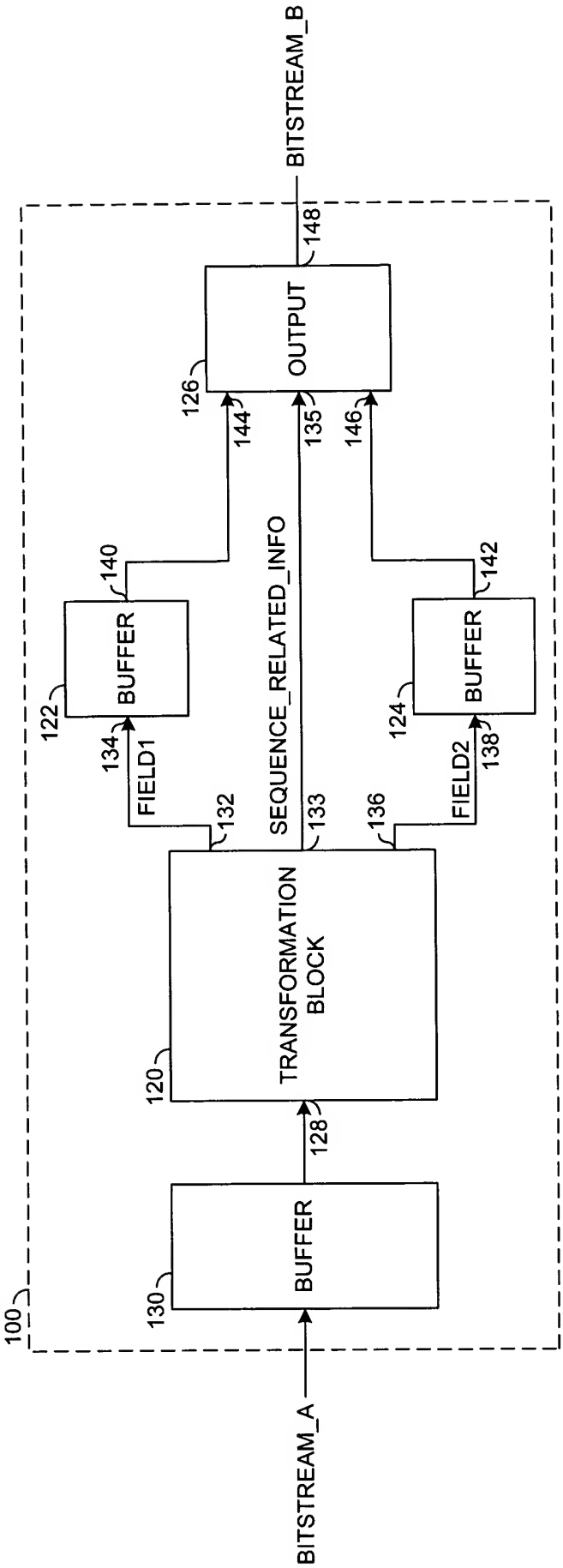
BITSTREAM_A
BITSTREAM_B
100
BUFFER
130
128
TRANSFORMATION BLOCK
120
132
133
136
FIELD1
134
FIELD2
138
SEQUENCE_RELATED_INFO
BUFFER
122
140
BUFFER
124
142
OUTPUT
126
144
135
146
148

FIG. 3

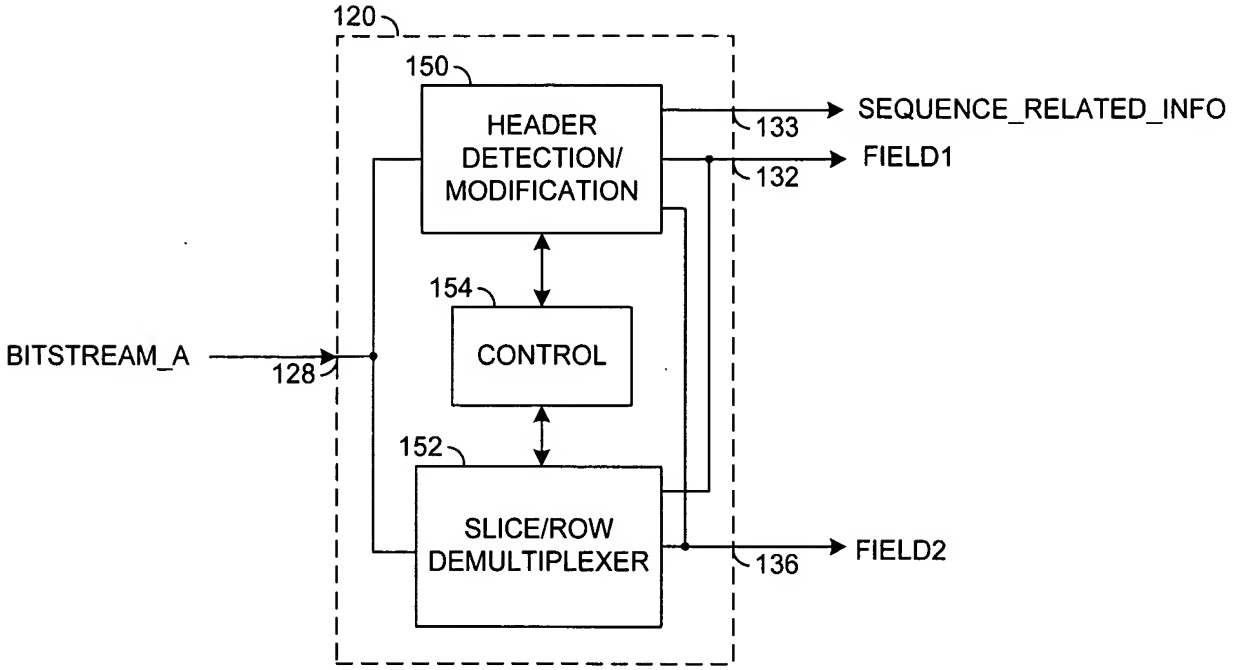
120
150
HEADER DETECTION/ MODIFICATION
133
SEQUENCE_RELATED_INFO
FIELD1
132
154
CONTROL
BITSTREAM_A
128
152
SLICE/ROW DEMULTIPLEXER
FIELD2
136

FIG. 4

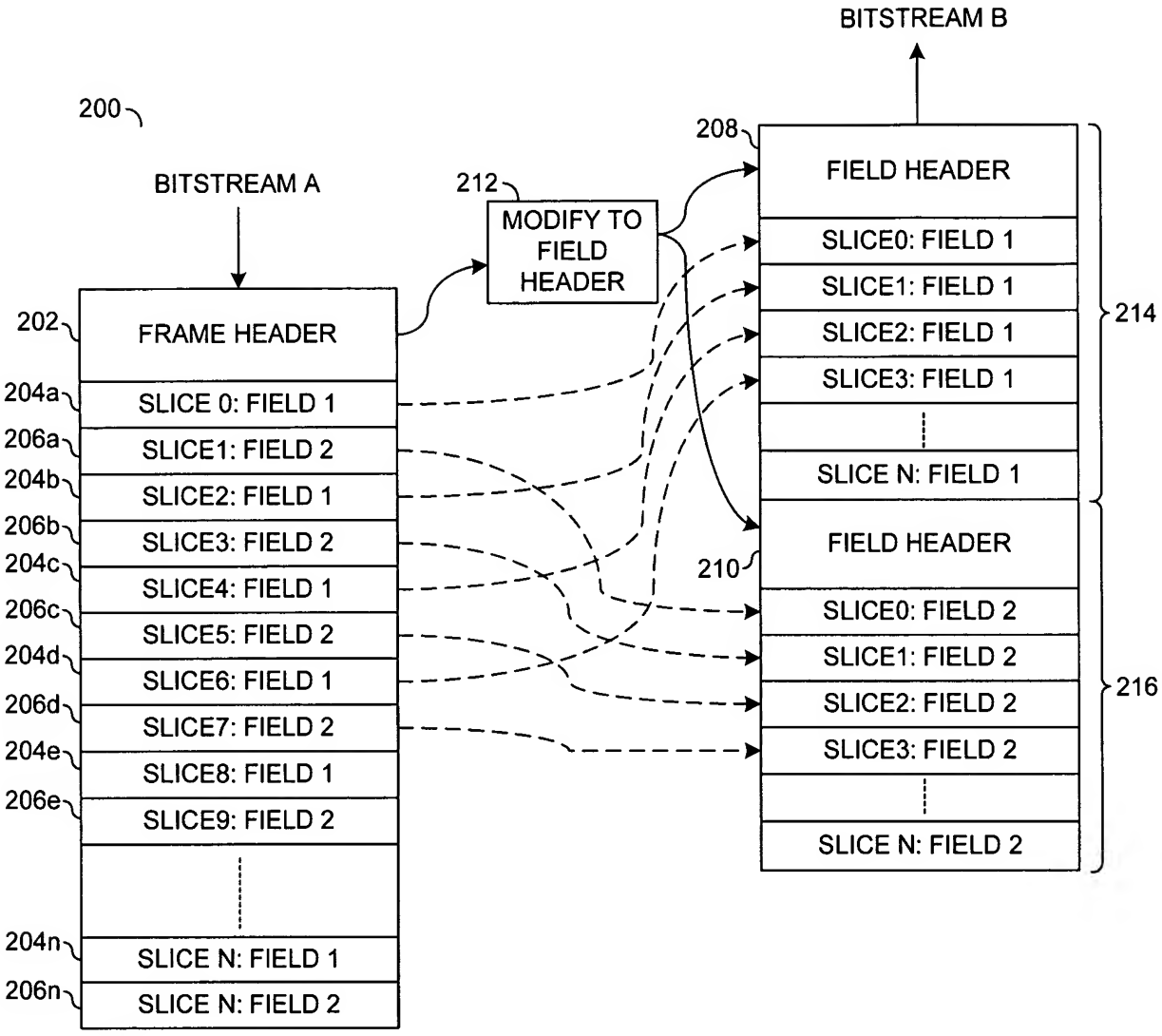
200
BITSTREAM A
BITSTREAM B
212
MODIFY TO FIELD HEADER
202
FRAME HEADER
204a
SLICE 0: FIELD 1
206a
SLICE1: FIELD 2
204b
SLICE2: FIELD 1
206b
SLICE3: FIELD 2
204c
SLICE4: FIELD 1
206c
SLICE5: FIELD 2
204d
SLICE6: FIELD 1
206d
SLICE7: FIELD 2
204e
SLICE8: FIELD 1
206e
SLICE9: FIELD 2
204n
SLICE N: FIELD 1
206n
SLICE N: FIELD 2
208
FIELD HEADER
SLICE0: FIELD 1
SLICE1: FIELD 1
SLICE2: FIELD 1
SLICE3: FIELD 1
SLICE N: FIELD 1
214
210
FIELD HEADER
SLICE0: FIELD 2
SLICE1: FIELD 2
SLICE2: FIELD 2
SLICE3: FIELD 2
SLICE N: FIELD 2
216

FIG. 5

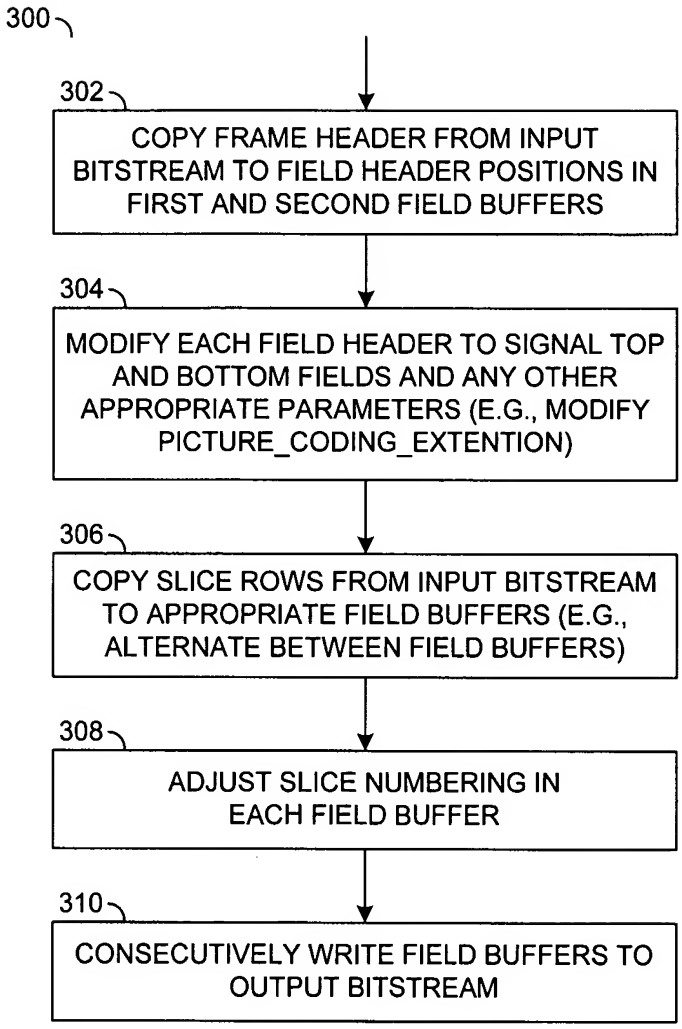
300
302
COPY FRAME HEADER FROM INPUT BITSTREAM TO FIELD HEADER POSITIONS IN FIRST AND SECOND FIELD BUFFERS
304
MODIFY EACH FIELD HEADER TO SIGNAL TOP AND BOTTOM FIELDS AND ANY OTHER APPROPRIATE PARAMETERS (E.G., MODIFY PICTURE_CODING_EXTENTION)
306
COPY SLICE ROWS FROM INPUT BITSTREAM TO APPROPRIATE FIELD BUFFERS (E.G., ALTERNATE BETWEEN FIELD BUFFERS)
308
ADJUST SLICE NUMBERING IN EACH FIELD BUFFER
310
CONSECUTIVELY WRITE FIELD BUFFERS TO OUTPUT BITSTREAM

FIG. 6